STATE OF MARYLAND

# DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201
Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

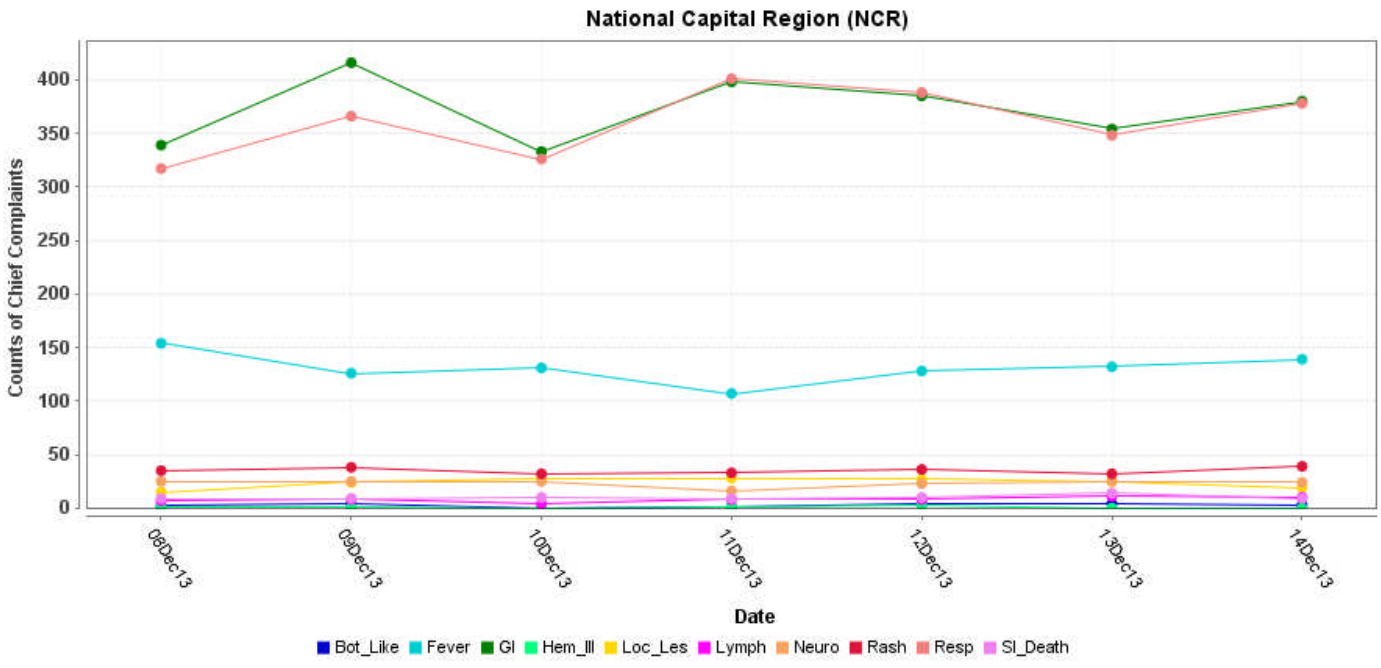
## December 20, 2013

## Public Health & Emergency Preparedness Bulletin: # 2013:50
## Reporting for the week ending 12/14/13 (MMWR Week #50)

**CURRENT HOMELAND SECURITY THREAT LEVELS**

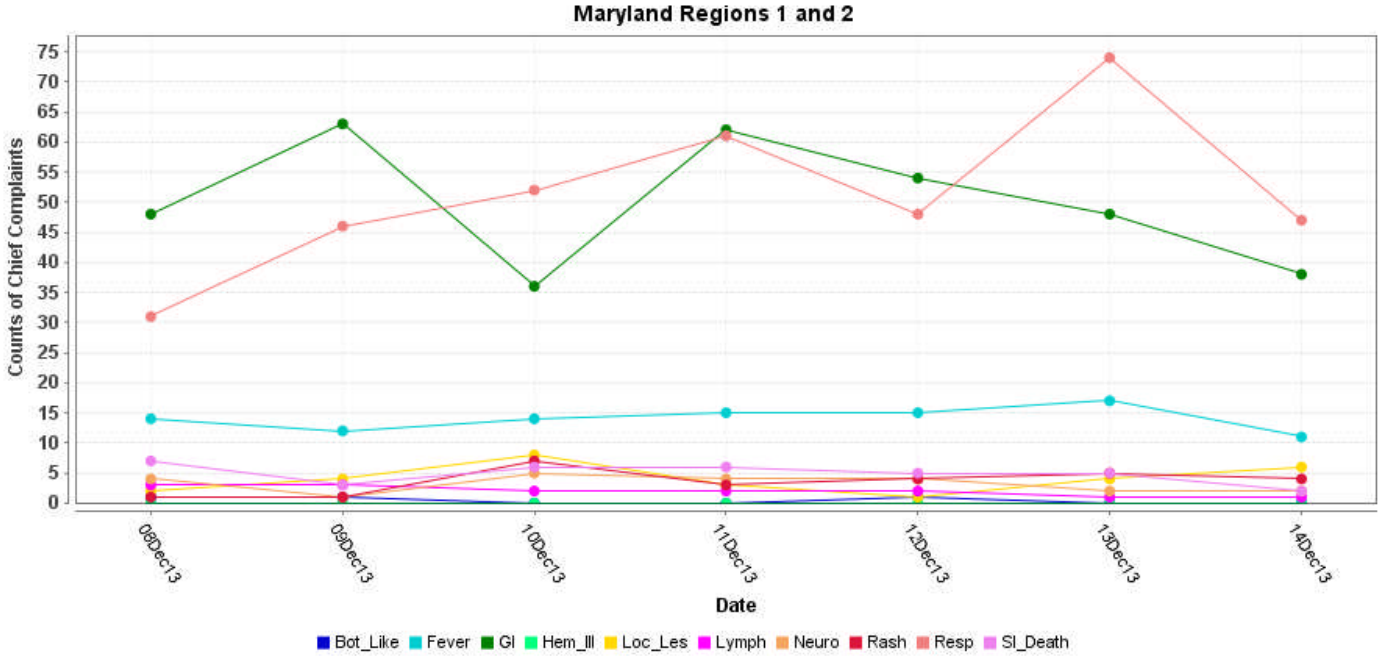
**National:** **No Active Alerts**
**Maryland:** **Level Four (MEMA status)**

**SYNDROMIC SURVEILLANCE REPORTS**
**ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):**
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.
Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

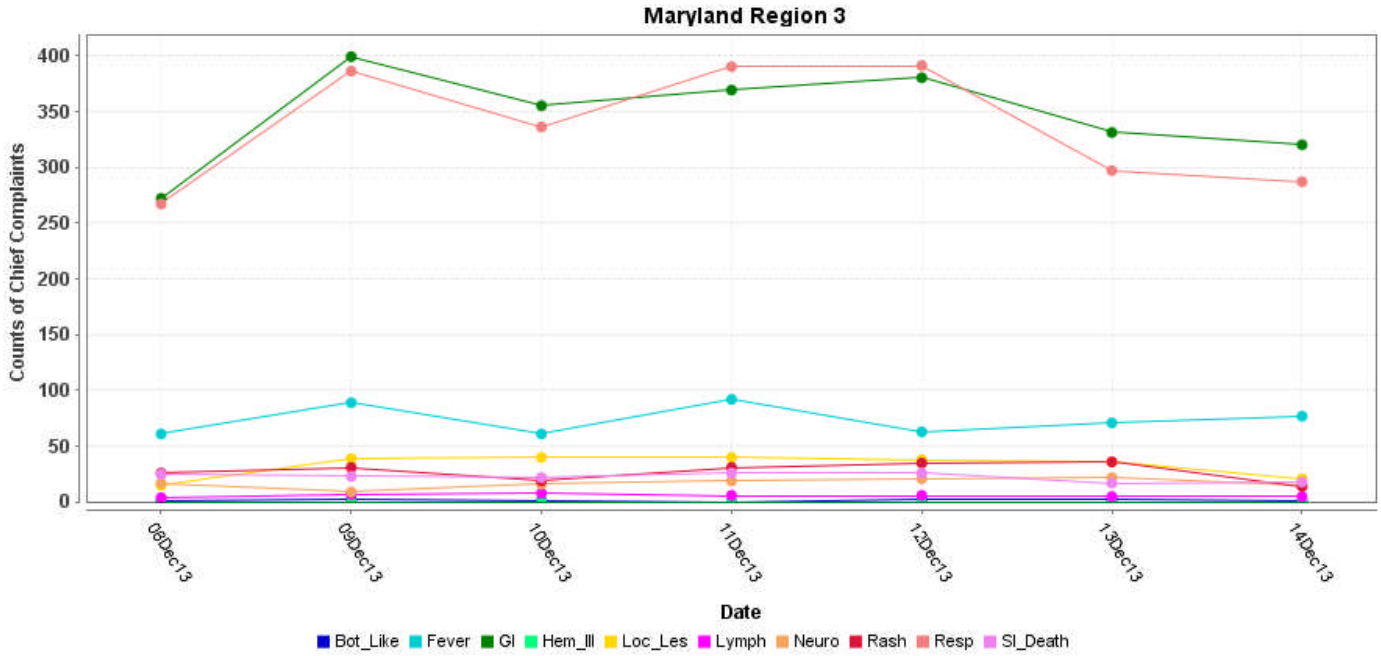



*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

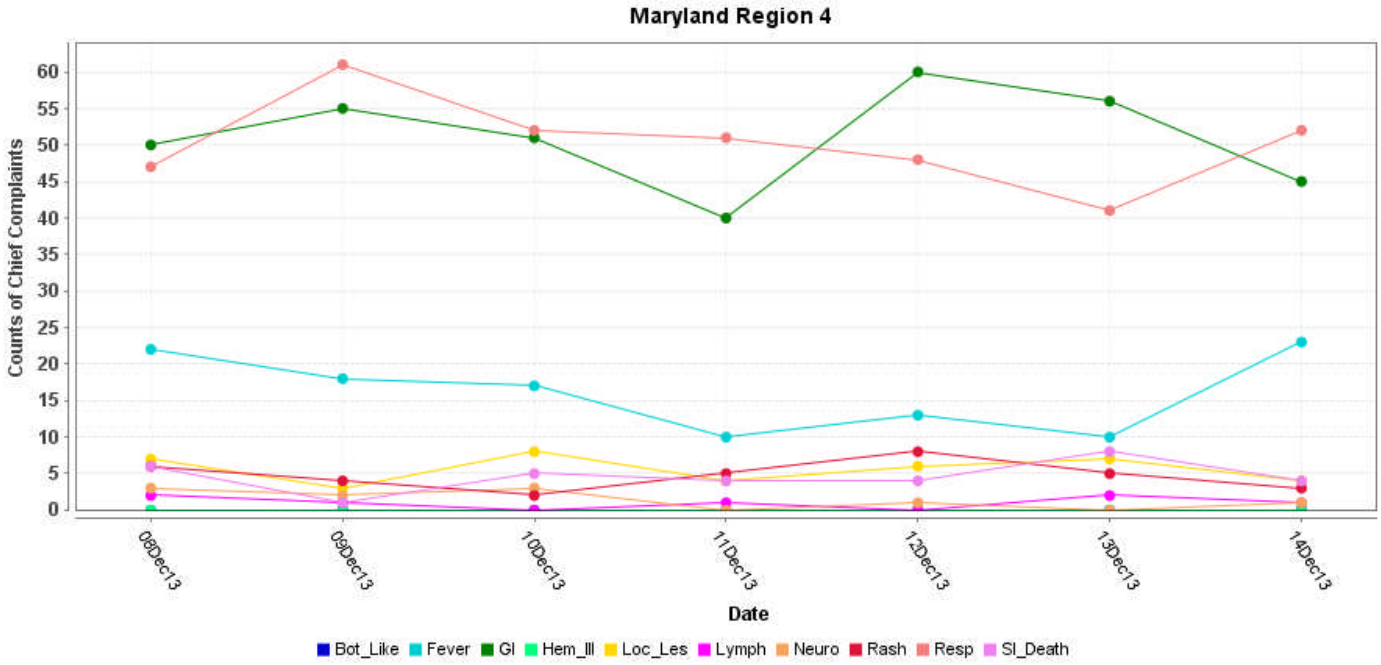
**MARYLAND ESSENCE:**



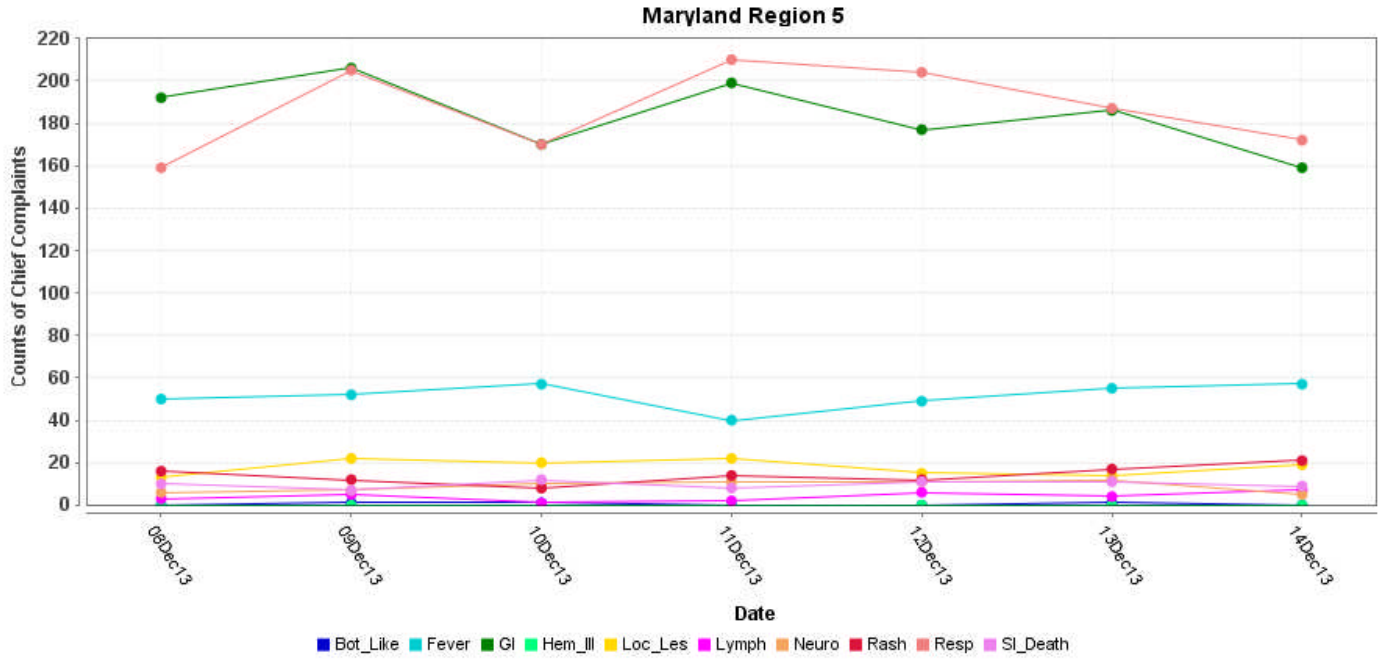

* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE




* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



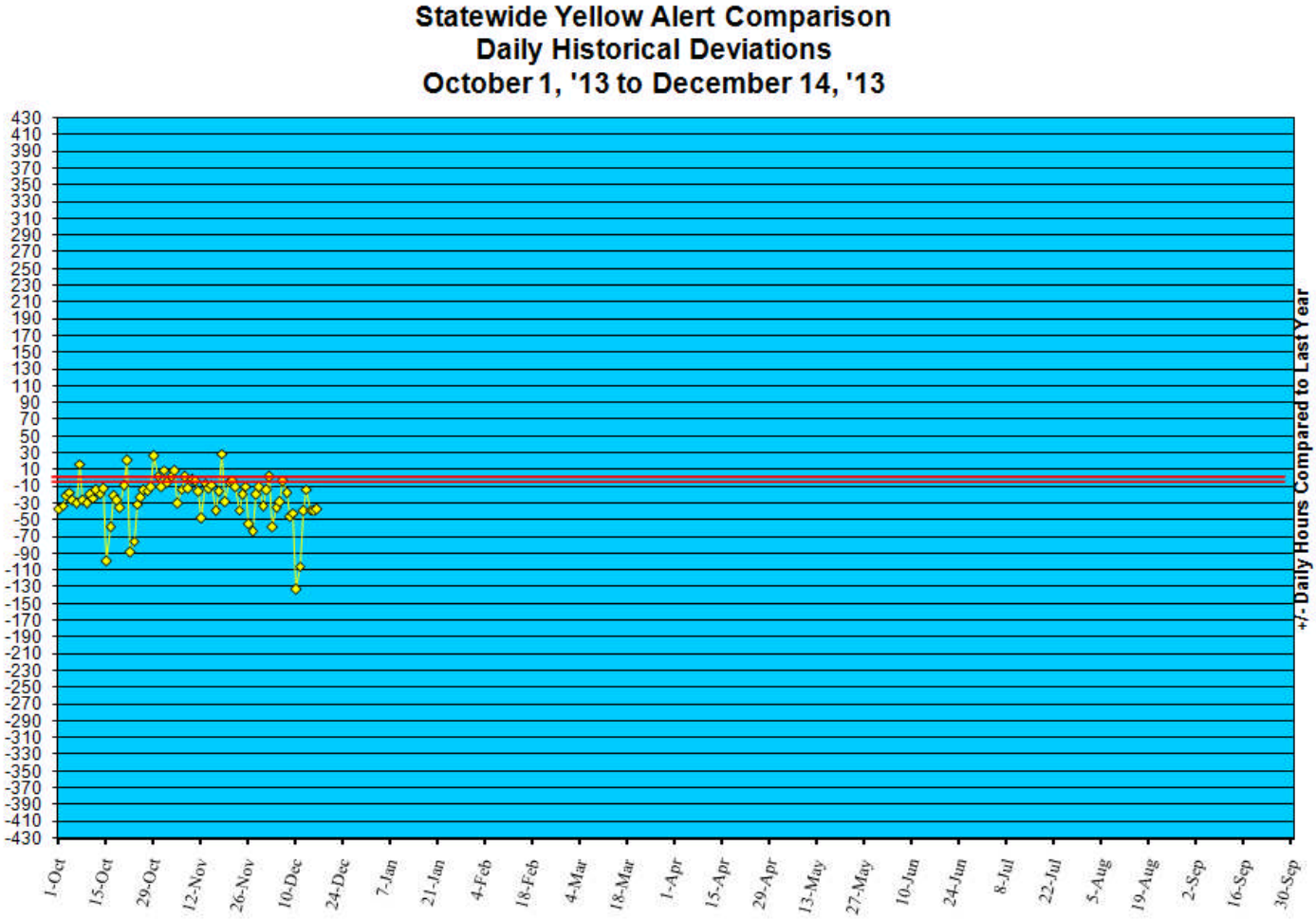

* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE




* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

**REVIEW OF EMERGENCY DEPARTMENT UTILIZATION**

**YELLOW ALERT TIMES (ED DIVERSION):** The reporting period begins 10/01/13.




**REVIEW OF MORTALITY REPORTS**

**Office of the Chief Medical Examiner:** OCME reports no suspicious deaths related to an emerging public health threat for the week.

**MARYLAND TOXIDROMIC SURVEILLANCE**

**Poison Control Surveillance Monthly Update:** Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in November 2013 did not identify any cases of possible public health threats.

## REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

### COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

| **Meningitis:** | **Aseptic** | **Meningococcal** |
|---|---|---|
| New cases (December 8 - December 14, 2013): | 12 | 0 |
| Prior week (December 1 - December 7, 2013): | 18 | 0 |
| Week#50, 2012 (December 10 – December 16, 2012): | 8 | 0 |

**4 outbreaks were reported to DHMH during MMWR Week 50 (December 8 - December 14, 2013)**

2 Gastroenteritis Outbreaks
1 outbreak of GASTROENTERITIS in a Nursing Home
1 outbreak of GASTROENTERITIS in a Hospital

2 Respiratory Illness Outbreaks
1 outbreak of INFLUENZA in a Nursing Home
1 outbreak of PNEUMONIA in a Nursing Home

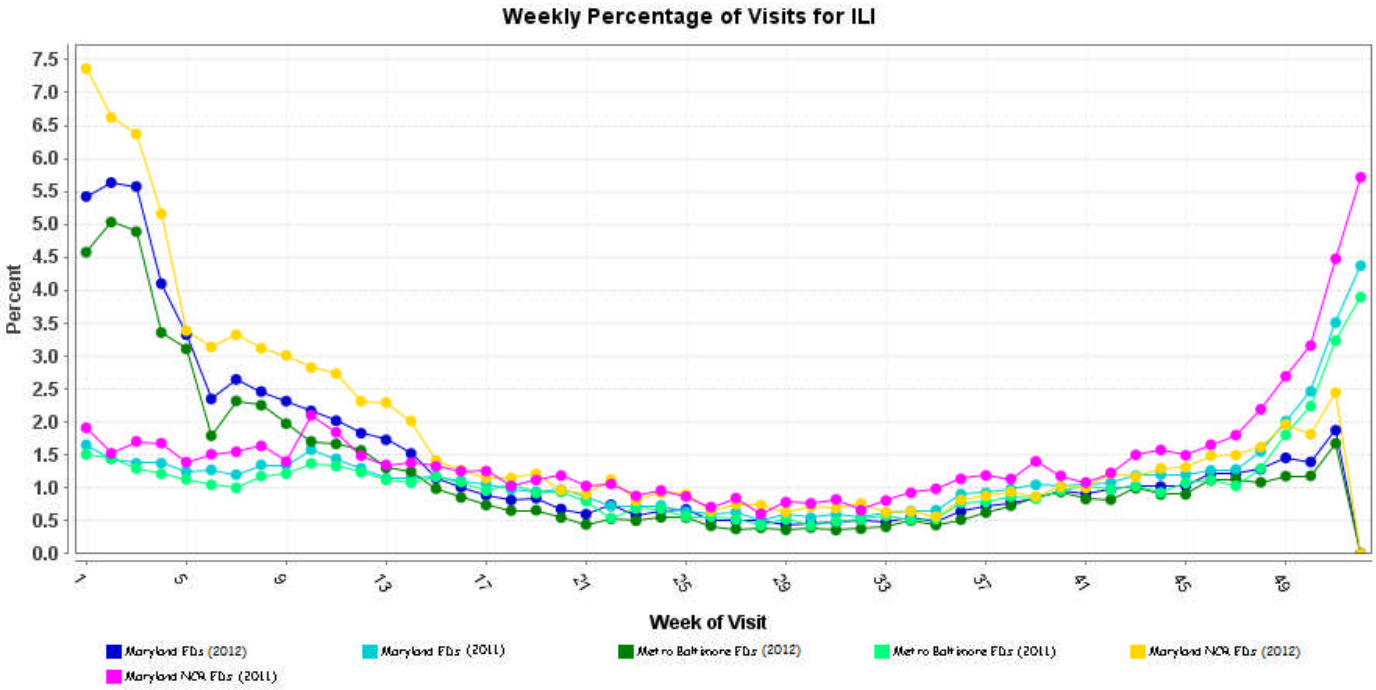
## MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 50 was: Local Spread with Minimal Intensity

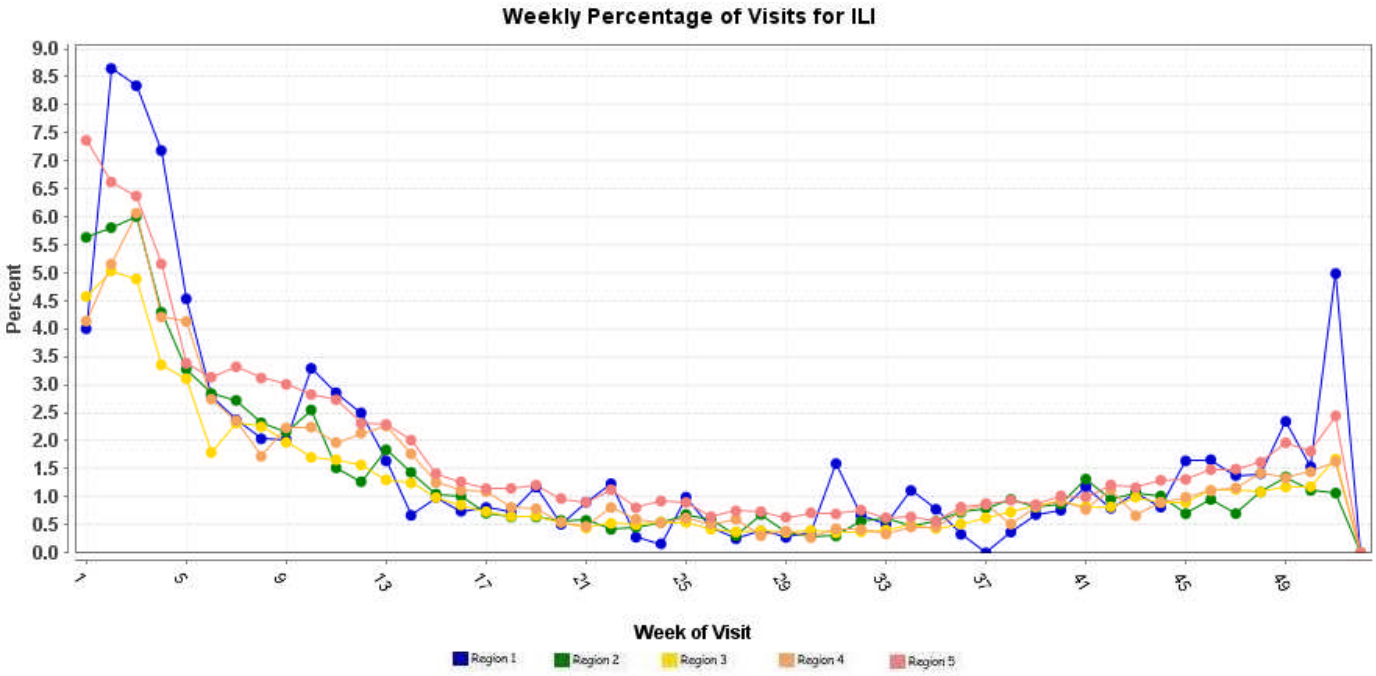
## SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



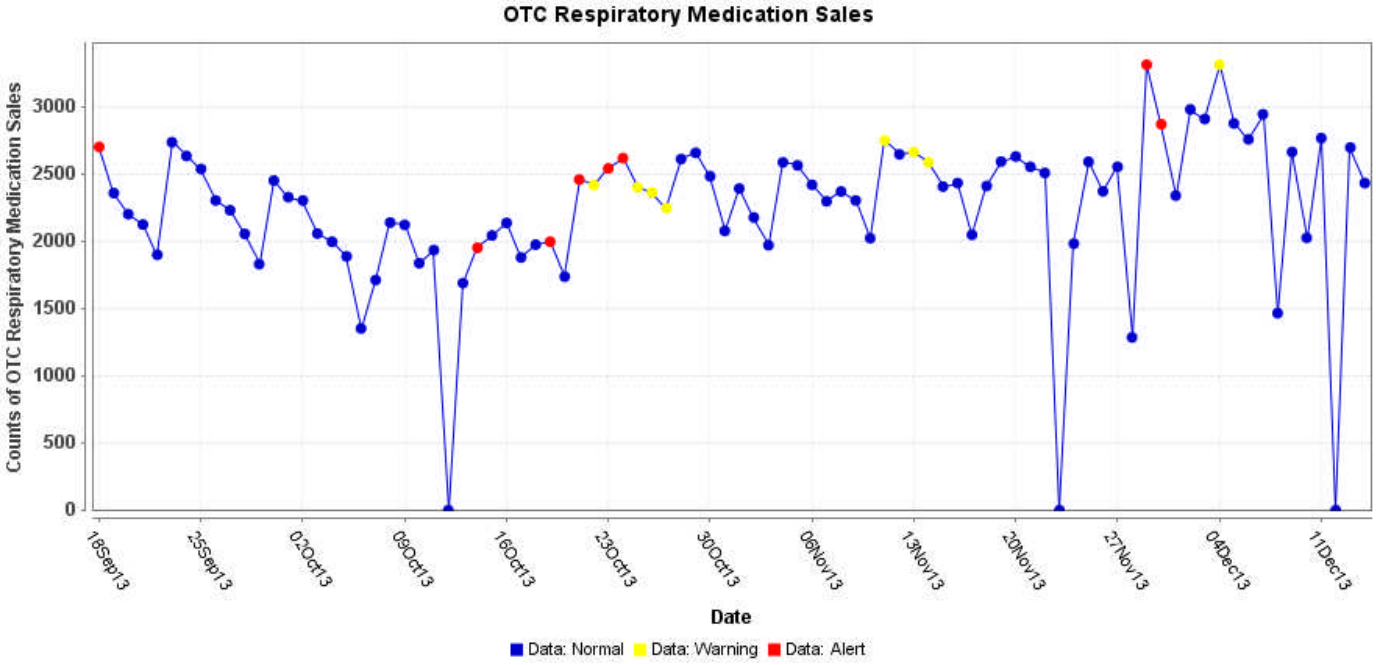

* Includes 2012 and 2013 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total




*Includes 2013 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

**OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:**

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



**PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS**

**WHO update:** The current WHO phase of pandemic alert for avian influenza is ALERT. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

Influenza A (H7N9) is one of a subgroup of influenza viruses that normally circulate among birds. Until recently, this virus had not been seen in people. However, human infections have now been detected. As yet, there is limited information about the scope of the disease the virus causes and about the source of exposure. The disease is of concern because most patients have been severely ill. There is no indication thus far that it can be transmitted between people, but both animal-to-human and human-to-human routes of transmission are being actively investigated.

**Alert phase**: This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur. As of December 10, 2013, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 648, of which 384 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

**AVIAN INFLUENZA (H7N9):** The World Health Organization (WHO) today [10 Dec 2013] confirmed 4 recent novel H7N9 avian flu cases, as scientists revealed their latest risk assessments based on genetic monitoring and lab tests. In a statement, the WHO said it has received reports of 2 infections from China's Zhejiang province, which include cases involving a 57-year-old man and a 30-year-old man who is his son-in-law. Some machine translations of a Chinese-language media report had suggested the 2 were father and son. A report today [10 Dec 2013] from Xinhua, China's state news agency, had more details about the connection between the 2 men. Li Lanjuan, MD, director of the Infectious Diseases Lab in Zhejiang province, told the news service that the man and his son-in-law were not living together before the older of the 2 got sick, but the younger one cared for his sick father-in-law. Lanjuan said that it's not clear whether the older man transmitted the virus to his son-in-law. The WHO said it also received reports of 2 H7N9 cases recently detected in Hong Kong, both of whom had traveled from the nearby mainland city of Shenzhen. The patients are a 36-year-old woman who was hospitalized in Hong Kong on 27 Nov 2013 after visiting Shenzhen, where she had slaughtered a chicken for cooking and eating. Hong Kong's other patient is an 80-year-old man from Shenzhen who traveled with family members to Hong Kong on 3 Dec 2013 for treatment of an underlying medical condition. He came down with a fever while in the hospital but is in stable condition. So far, all close contacts of the 2 patients have tested negative for the H7N9 virus, and there are no epidemiologic links between the 2 cases, according to the WHO. So far, there is no evidence of sustained human-to-human transmission of H7N9, the agency said. The 4 new cases bring the unofficial global number of H7N9 cases to 143, which includes 45 deaths. All but 3 of the cases were detected in China, but those 3 infections have travel links to China. Meanwhile, the task of assessing the risk of the new virus continues in national laboratories and research institutions. A spokesman for China's National Health and Family Planning Commission (NHFPC) told reporters at a press conference today [10 Dec 2013] that no H7N9 mutations have been detected, and transmission from animals appears to be the only way humans are becoming infected with the virus, according to a separate report from Xinhua. In another lab development, researchers based at Icahn School of Medicine at Mount Sinai in New York City today [10 Dec 2013] reported findings from experiments that suggest oseltamivir-resistant strains of H7N9 transmit and cause disease just as effectively as strains that aren't resistant to the drug. The team published its findings in the latest online edition of Nature Communications. Analysis of a strain from one of Shanghai's 1st H7N9 patients revealed the resistance marker in one of the strains, and resistant H7N9 strains have also been linked to clinical treatment failures in some of China's severely ill patients. The reports raised concerns, because, so far, there is no vaccine against the novel strain, which leaves antiviral medications as a key treatment and prevention measure. In the Nature Communications study, researchers used human tracheobronchial endothelial cells and a mouse model to test whether the resistance mutation affects replication and pathogenicity. They also tested how well resistant and sensitive H7N9 strains replicated in mice treated with oseltamivir (Tamiflu) and zanamivir (Relenza). Their experiments also tested the ability of the strains to transmit by respiratory droplets in guinea pigs. The investigators found that the resistance mutation, when compared with antiviral-sensitive H7N9, didn't hamper the ability to replicate in human respiratory tract cells or cause disease or deaths in mice. Tests in guinea pigs found that airborne H7N9 transmission was inefficient, but that acquiring oseltamivir resistance didn't further lower transmissiblity. The group noted that the findings run counter to earlier findings for oseltamivir-resistant seasonal H3N2. They wrote that this observation underscores the sometimes unpredictable nature of fitness in influenza A viruses.

**NATIONAL DISEASE REPORTS***

**BOTULISM (TEXAS):** 12 December 2013, There are 4 suspected cases of botulism in Amarillo, Texas. On Fri 6 Dec 2013, the Health Department was informed of the 1st potential case in Amarillo. They soon began investigating and discovered 3 other possible cases. Two of the patients matched the criteria and were given botulinum antitoxin. Doctors say they are slowly improving. All 4 patients are adults and are currently hospitalized. "We've got a small group of people who know each other in some manner; we hope that there are no other cases, but we just want to do our due diligence and make sure that we are protecting our community by providing information," said Casie Stoughton, the Assistant Director of the City of Amarillo Public Health Department. While one patient remains on a ventilator, another is now breathing on their own after receiving similar treatment. Another patient had symptoms, began feeling better, and then traveled to Georgia before having symptoms again and is currently hospitalized there. The last patient is getting better on their own because officials say they caught it sooner than the others. While all 4 of the patients know one another, the source of the illness has not been determined. "There's a lot we don't know; we haven't found common sources; we haven't found any common restaurants. ... There are just a lot of pieces of the puzzle that we don't have," Stoughton said. The CDC is sending experts to help the City of Amarillo investigate whether these patients do have botulism, and, if so, to determine the cause. Since botulism is often a foodborne illness, the investigation will center around what the patients ate in the hours and days leading up to their illnesses. Common symptoms include blurry vision, difficulty swallowing, slurred speech, and heavy or droopy eye lids. Because the bacterial toxin attacks the body's nerve endings, it can lead to paralysis. Symptoms usually appear 12 to 36 hours after being exposed to the toxin, but it may take up to 8 days. Doctors say it can take up to 6 months for a patient to be fully healthy again. If left untreated, it can be fatal. The disease cannot be passed person to person. (Botulism is listed in Category A on the CDC List of Critical Biological Agents)
*non-suspect case

**INTERNATIONAL DISEASE REPORTS***

**BRUCELLOSIS (PANAMA):** 13 December 2013, A total of 7 people in Capira [district, Panama province] are suspected of being infected with bovine brucellosis, a potentially deadly disease detected in cattle from 6 farms the area and in Darien. The cases include 2 children, aged 2 and 6, and a 17 year old, and were detected after the Ministry of Health (MoH) took blood samples from 22 residents of the community of Monte Oscuro, in the village of Cermak, to see if they had the zoonotic disease (transmitted by animals to humans). Bredio Velazco, Veterinarian and Animal Health deputy director of the Ministry of Agricultural Development (MIDA), confirmed to FOX Report that there are 6 affected animal farms, but denied that it was passed to humans. The secretary general of the MoH, Felix Bonilla reported that they are awaiting for results of confirmatory tests from Gorgas Memorial Hospital reports La Prensa, The 22 examined in October [2013] are working on the farms El Pensamiento and Los Mangos, located 30 minutes from downtown Capira. The [detection of bovine brucellosis] in Capira Resume took place in October 2013, when 72 cattle were slaughtered on 3 farms, 2 dairy and 1 meat, in Monte Oscuro, and the valley was quarantined. Despite the measure, which banned the movement of cattle, Velazco confirmed that 2 animals were infected with brucellosis in Darien, on a farm whose owner is the same as that of one in Capira, which has raised questions about the effectiveness of the quarantine. "129 animals were sacrificed," Velazco told local television. The official did not seem concerned said La Prensa. "I foresaw more cases," he said. "We are mitigating the situation," he added. But for the Association of Dairy Producers (Aprogalpa), the cases are "worrying" because it is a highly contagious disease and especially as the origin of the outbreak is still unknown. The last time Panama had bovine brucellosis was in 2004, and human cases in 2009, according to the World Organisation for Animal Health (OIE). The spread of brucellosis to humans is through consumption of unpasteurized milk, undercooked meat, or contact with secretions from infected animals. It produces abortions in animals and in humans, fever, weakness, and general pain. "It is an extremely infectious zoonosis" warns the OIE. (Brucellosis is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

**CIGUATERA FISH POISONING (SPAIN):** 12 December 2013, The service of epidemiology and prevention of the Directorate General for Public Health of the Canary Islands government is investigating the emergence of 10 cases of people who may have ciguatera poisoning related to fish consumption in San Bartolome. None of those affected by this outbreak required hospital admission, but some were treated in emergency services. The cases had digestive symptoms such as vomiting, diarrhea and abdominal pain and, subsequently, paresthesia, paradoxical sensations and muscle aches. The presence of fish containing the ciguatera toxin has a greater impact on the islands of Lanzarote and Fuerteventura where larger reef fish can be caught. Ciguatera is found in tropical and subtropical seas, in areas of coral reefs. Ciguatera poisoning can occur after the ingestion of any of the more than 400 species of fish in the tropical reefs, where plankton may produce ciguatoxin, accumulating in the flesh of the marine animal. The larger, older fish are more toxic. The flavor of the fish is not altered, and there is no known method of freezing or cooking them that protects from poisoning. Symptoms appear from one to several hours after ingestion. The characteristic illness lasts about 8 days in most cases. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

**PLAGUE (PERU):** 10 December 2013, The Regional Health Management reported Tuesday, 10 Dec 2013, the 1st victim in 2013 of pneumonic plague in the La Libertad region. It is a 17-year-old, according to the regional manager of health, Jose Evangelista. The regional official did not name the victim, although it was known that he lived with his family in the village of Mocan, located in the district of Casa Grande, in the province of Ascope. As reported by Evangelista, before entering Trujillo Regional Teaching Hospital, where the victim died, he spent several hours in the home of relatives in the village El Milagro in Huanchaco district center. In the area, said the regional manager of health, would have been about 150 families. Therefore, a health brigade came to the area to conduct a campaign to prevent the plague bacteria from spreading. (Plague is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

National and International Disease Reports are retrieved from http://www.promedmail.org/.

**OTHER RESOURCES AND ARTICLES OF INTEREST**

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey

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**NOTE**: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail us. If you have information that is pertinent to this notification process, please send it to us to be included in the routine report.

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**Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents**

## Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

| Syndrome | Definition | Category A Condition |
|---|---|---|
| Botulism-like | ACUTE condition that may represent exposure to botulinum toxin<br>ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy.<br>ACUTE descending motor paralysis (including muscles of respiration)<br>ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point. | Botulism |
| Hemorrhagic Illness | SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola<br>ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF<br>ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria | VHF |
| Lymphadenitis | ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck) | Plague (Bubonic) |
| Localized Cutaneous Lesion | SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia<br>ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia<br>INCLUDES insect bites<br>EXCLUDES any lesion disseminated over the body or generalized rash<br>EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease | Anthrax (cutaneous)<br>Tularemia |
| Gastrointestinal | ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract<br>SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis<br>ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea<br>EXCLUDES any chronic conditions such as inflammatory bowel syndrome | Anthrax (gastrointestinal) |

**Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents**
(continued from previous page)

| Syndrome | Definition | Category A Condition |
|---|---|---|
| Respiratory | ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media)<br>SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus<br>ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis<br>ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain<br>EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE *acute exacerbation* of chronic illnesses.) | Anthrax (inhalational)<br>Tularemia<br>Plague (pneumonic) |
| Neurological | ACUTE neurological infection of the central nervous system (CNS)<br>SPECIFIC diagnosis of acute CNS infection such as pneumoccocal meningitis, viral encephailitis<br>ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephailitis NOS, encephalopathy NOS<br>ACUTE non-specific symptoms of CNS infection such as meningismus, delerium<br>EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's | Not applicable |
| Rash | ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs)<br>SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox<br>ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem<br>EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea<br>EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema | Smallpox |
| Specific Infection | ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal)<br>INCLUDES septicemia from known bacteria<br>INCLUDES other febrile illnesses such as scarlet fever | Not applicable |

**Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents** (continued from previous page)

| Syndrome | Definition | Category A Condition |
|---|---|---|
| Fever | ACUTE potentially febrile illness of origin not specified<br>INCLUDES fever and septicemia not otherwise specified<br>INCLUDES unspecified viral illness even though unknown if fever is present<br>EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome | Not applicable |
| Severe Illness or Death potentially due to infectious disease | ACUTE onset of shock or coma from potentially infectious causes<br>EXCLUDES shock from trauma<br>INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births<br>EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths | Not applicable |